

RECEIVED
CENTRAL FAX CENTER

JUL 18 2007

Serial No. 09/674,201

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application and reflects the addition of new claims 58-66.

Listing of Claims:

1-45. **Cancelled.**

46. **(Previously Presented)** A cationic vinyl addition polymer comprising in polymerized form

(a) at least one non-ionic monomer having a non-aromatic hydrophobic monomer;

(b) at least one cationic monomer; and

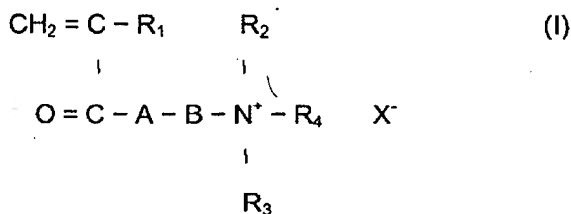
(c) (meth)acrylamide;

wherein the cationic vinyl addition polymer is prepared from a monomer mixture comprising from 75 to 95 mole% of (meth)acrylamide;

(a) said at least one non-ionic monomer having a non-aromatic hydrophobic group comprises an acrylamide-based monomer selected from the group consisting of N-n-propyl (meth)acrylamide and N-isopropyl (meth)acrylamide;

(b) said at least one cationic monomer comprises a cationic monomer selected from the group consisting of:

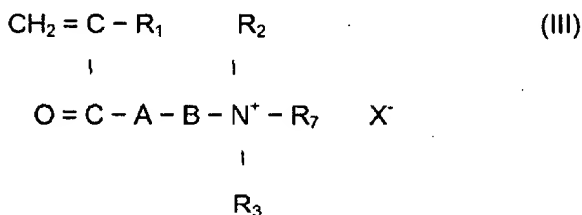
(i) cationic monomers represented by the general formula (I):



wherein R₁ is H or CH₃; R₂ and R₃ are each H or an alkyl group having from 1 to 3 carbon atoms; A is O or NH; B is an alkylene group of from 2 to 4 carbon atoms or a hydroxy propylene group; R₄ is a non-aromatic hydrocarbon group containing from 4 to 8 carbon atoms; and X⁻ is an anionic counterion;

Serial No. 09/674,201

(ii) cationic monomers represented by the general formula (III):



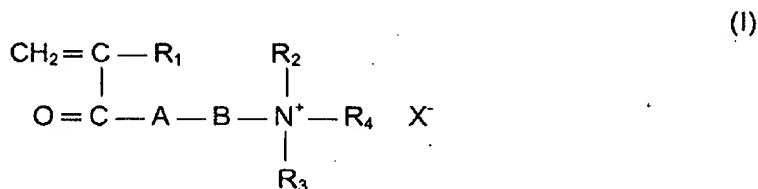
wherein R_1 is H or CH_3 ; R_2 and R_3 are each H or an alkyl group having from 1 to 3 carbon atoms; A is O or NH; B is an alkylene group of from 2 to 4 carbon atoms, or a hydroxy propylene group; R_7 is H, an alkyl group having from 1 to 3 carbon atoms, a benzyl group or a phenylethyl group; and X^- is an anionic counterion;

(iii) and mixtures thereof.

47. **(Original)** The cationic vinyl addition polymer of claim 46, wherein the (meth)acrylamide is acrylamide.

48-52. **Cancelled.**

53. **(Original)** The cationic vinyl addition polymer of claim 46, wherein the cationic vinyl addition polymer comprises in polymerized form a cationic monomer represented by the general formula (I):



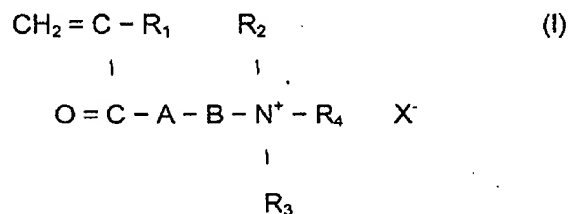
Serial No. 09/674,201

wherein R_1 is H or CH_3 ; R_2 and R_3 are each H or an alkyl group having from 1 to 3 carbon atoms; A is O or NH; B is an alkylene group of from 2 to 4 carbon atoms or a hydroxy propylene group; R_4 is a non-aromatic hydrocarbon group containing from 4 to 8 carbon atoms; and X^- is an anionic counterion.

54. **Cancelled.**

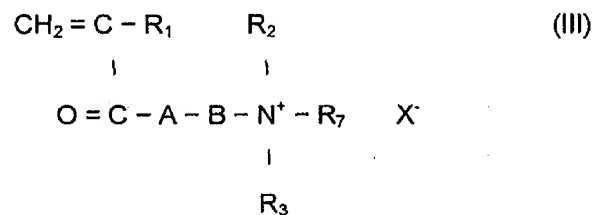
55. **(Previously Presented)** The cationic vinyl addition polymer of claim 46, wherein the cationic vinyl addition polymer is prepared from a monomer mixture comprising from 5 to 25 mole% of non-ionic monomer having a non-aromatic hydrophobic group, and from 95 to 75 mole% of at least one cationic monomer and (meth)acrylamide.

56. **(Previously Presented)** The cationic vinyl addition polymer of claim 46, wherein the cationic vinyl addition polymer comprises in polymerized form a cationic monomer represented by the general formula (I):



wherein R_1 is H or CH_3 ; R_2 and R_3 are each H or an alkyl group having from 1 to 3 carbon atoms; A is O or NH; B is a hydroxy propylene group; R_4 is a non-aromatic hydrocarbon group containing from 4 to 8 carbon atoms; and X^- is an anionic counterion.

57. **(Previously Presented)** The cationic vinyl addition polymer of claim 46, wherein the cationic vinyl addition polymer comprises in polymerized form a cationic monomer represented by the general formula (III):



P:\morris\ANO\ANOB182U6.3152.Rule312 Amend.doc

4

Serial No. 09/674,201

wherein R_1 is H or CH_3 ; R_2 and R_3 are each H or an alkyl group having from 1 to 3 carbon atoms; A is O or NH; B is a hydroxy propylene group; R_7 is H, an alkyl group having from 1 to 3 carbon atoms, a benzyl group or a phenylethyl group; and X^- is an anionic counterion.

58. **(New)** A process for the production of paper which comprises:
- (i) providing a suspension containing cellulosic fibres, and optional fillers;
 - (ii) adding to the suspension drainage and retention aids comprising an anionic microparticulate material and the cationic vinyl addition polymer of claim 46;
 - (iii) forming and dewatering the obtained suspension on a wire.
59. **(New)** The process of claim 58, wherein the anionic microparticulate material is selected from the group consisting of silica-based particles, bentonite and mixtures thereof.
60. **(New)** The process of claim 58, wherein the anionic microparticulate material is selected from silica-based particles having a specific surface area of at least $50 \text{ m}^2/\text{g}$.
61. **(New)** The process of claim 58, wherein the drainage and retention aids further comprise a low molecular weight cationic organic polymer.
62. **(New)** The process of claim 61, wherein the low molecular weight cationic organic polymer has a molecular weight up to 700.000.
63. **(New)** The process of claim 58, wherein the suspension that is dewatered on the wire has a conductivity of at least 2.0 mS/cm ;
64. **(New)** The process of claim 63, wherein the conductivity is at least 3.5 mS/cm .
65. **(New)** The process of claim 58, wherein the process further comprises dewatering the suspension on a wire to obtain a wet web of paper and white water, recirculating white water and optionally introducing fresh water to form a suspension containing cellulosic fibres, and optional fillers, to be dewatered, wherein the amount of fresh water introduced is less than 30 tons per ton of dry paper produced.
66. **(New)** The process of claim 65, wherein less than 10 tons of fresh water is introduced into the process per ton of dry paper produced.